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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/666,982	09/19/2003	Tzvi Avnery	2251.2002-009	8622
21005 7590 05/29/2008 HAMILTON, BROOK, SMITH & REYNOLDS, P.C. 530 VIRGINIA ROAD P.O. BOX 9133 CONCORD, MA 01742-9133				
EXAMINER				
MAYEKAR, KISHOR				
ART UNIT		PAPER NUMBER		
1795				
MAIL DATE		DELIVERY MODE		
05/29/2008		PAPER		

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

## Office Action Summary

**Application No.**

10/666,982

**Applicant(s)**

AVNERY, TZVI

**Examiner**

Kishor Mayekar

**Art Unit**

1795

**Period for Reply** -- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 04 March 2008.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-5, 24 and 25 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-5, 24 and 25 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-8508)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

## DETAILED ACTION

### *Continued Examination Under 37 CFR 1.114*

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 4 March 2008 has been entered.
2. Applicant's arguments filed 4 February 2008 with respect to claims 1-5, 24 and 25 have been considered but are moot in view of the new ground(s) of rejection.

### *Claim Rejections - 35 USC § 103*

3. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.
4. Claims 1-5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Namba et al. (5,244,552) in view of Helfritsch et al. (US 5,695,616), both references cited in the last Office action. Namba's invention is directed to a process and apparatus for desulphurization and/or denitration of waste gas by multi-stage electron beam irradiation.

Namba discloses in Fig. 2 that the apparatus comprises an irradiation vessel accommodating a plurality of electron beam generators, wherein the irradiation vessel has a cross section through which the waste gas flows and the electron beam generators are configured to irradiate from both sides of the irradiation vessel. The differences between Namba and the instant claims are the detailings of the recited port duct and the recited exit window mounted to the irradiation vessel. Helfritsch teaches in a device for treating flue gases by irradiation with electron beam the detailings (Figs. 1 and 2; paragraph crossing cols. 3 and 4; and col. 5, lines 31-34). The subject matter as a whole would have been obvious to one having ordinary skill in the art at the time the invention was made to have modified Namba's teachings as shown by Helfritsch because, with the duct port this would result in adding ammonia to the waste gas before the electron beam irradiation, and with the window the electrons generated from the electron beam generators are accelerated into the waste gas flowing through the irradiant vessel past the window.

As to the subject matter of claim 5, since it is not a structure, it cannot be given any patentable weight. Further, since Namba discloses the waste gas from a coal-fired power plant (last paragraph of col. 4) and Helfritsch teaches the waste gas from a fossil fuel fired boiler and from municipal solid waste (col. 1, lines 11-15), the waste gas of Namba or Helfritsch contains volatile organic compounds.

5. Claims 24 and 25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Namba '552 as modified by Helfritsch '616 as applied to claims 1-5 above, and further in Hirai (US 5,015,442). Namba as applied above further discloses in an apparatus for gas treatment by electron beam irradiation that that ozone is formed during the treatment (col. 3, lines 49-52). The difference between the references as applied above and the instant claims is the provision of the recited reactive bed. Hirai teaches in a device for treating air the provision of particulate catalyst to remove ozone therefrom (Fig. 1). The subject matter as a whole would have been obvious to one having ordinary skill in the art at the time the invention was made to have modified the references' teachings as shown by Hirai because this would result in removing ozone generated during the treatment. Further, it has been held that the motivation to make a specific structure is always related to the properties or uses one skilled in the art would expect the structure to have, *In re Newell* 13 USPQ 2d 1248, *Fromson v. Advance Offset Plate* 225 USPQ 26; *In re Gyurik* 201 USPQ 552.

#### ***Response to Arguments***

6. Applicant's arguments filed 4 February 2008 have been fully considered but they are not persuasive because of the new ground of rejections as set forth in the paragraphs above.

*Conclusion*

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kishor Mayekar whose telephone number is (571) 272-1339. The examiner can normally be reached on Monday-Thursday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nam Nguyen can be reached on (571) 272-1342. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Kishor Mayekar/  
Primary Examiner, Art Unit 1795